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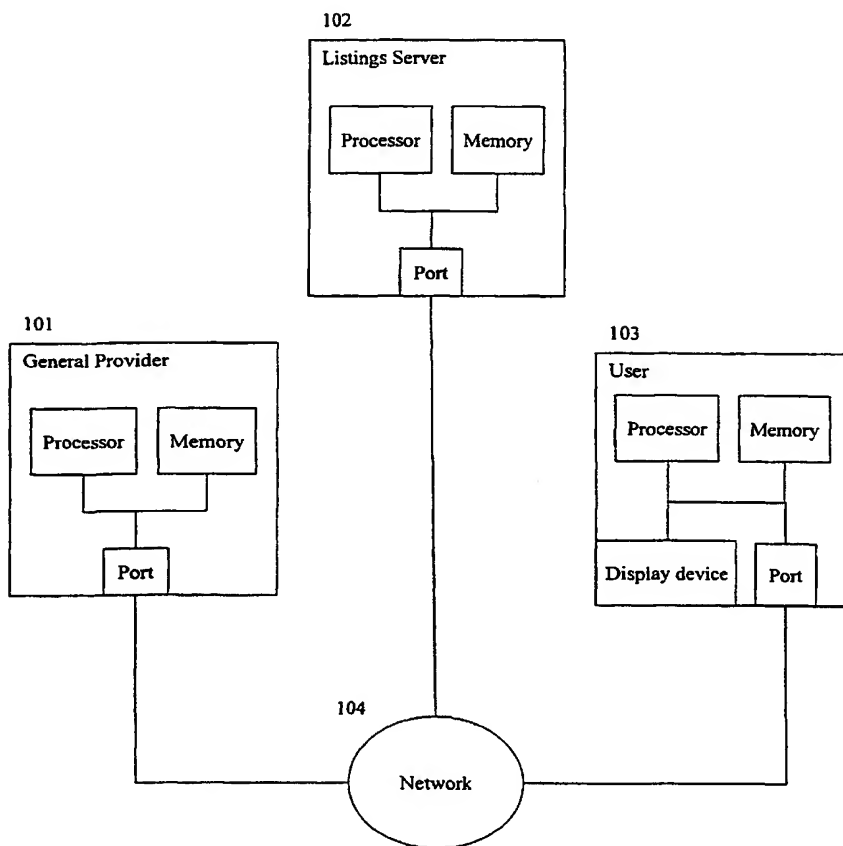
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(54) Title: SYSTEM AND METHOD FOR PROVIDING PROGRAM LISTINGS INFORMATION



(57) Abstract: A system and method for providing programming listing information to a user. A listings server (102) receives a request for listings information from the general purpose information service provider (101). This request is typically triggered by a request from a user (103) for a customized page. Listings information is identified and sent to the general purpose information service provider based at least partly upon information included in the listings request. The listings information can also be composed in accordance with prearranged conditions set by the general purpose information service provider (101) and/or the listings server (102), format codes sent separately by the general purpose information service provider (101), etc. The listings information is incorporated into a dynamically generated customized page that is sent to the user (103). In this way, the user (103) is advantageously provided with customized listings information that comports with the preferences expressed by the user (103).

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SYSTEM AND METHOD FOR PROVIDING PROGRAM LISTINGS INFORMATION

5 Cross Reference to Related Application

This invention relates to the following co-pending application, to which priority is claimed, and which is incorporated by reference in its entirety:

“System and Method for Providing Program Listings Information”, Ser. No. 60/136,387 (Attorney Docket No. 10487-27), filed May 27, 1999.

10

Field of the Invention

The field of the invention is the dissemination of entertainment programming listings information ("listings information"), and in particular a system and method using a general purpose information server and a special purpose listings server to
15 provide listings information to a user.

Background of the Invention

Entertainment programming listings information informs a user when and where a particular piece of entertainment (e.g., a television show, a movie showing, etc.) can be enjoyed by the user. An example of listings information is "The Donna
20 Brady Show on Channel 4 on Wednesday, August 4 from 11:00 PM to 12:00 AM."

A known way of disseminating listings information is through the printed media. The publication "TV Guide" displays a grid pattern of listings information for each day, with the channel down the left hand side of the page, and the times across the top. Television show titles are displayed within the grid, advantageously showing the channel on which the show can be seen, its start and end times, day on which it is to be shown, etc. Disseminating this information through print media is disadvantageously slow, expensive, and incapable of being updated once the printing has been completed.

Another known system for disseminating listings information is through a cable company or set top box. For example, channel one on a cable system is dedicated to displaying a vertically scrolling grid of television listings information. The channel is listed on the left side of the grid, and the time is listed across the top. Show titles are listed within the grid, showing the channel and times at which the show can be seen on the cable system. This known system can advantageously be more easily updated than print media, but disadvantageously suffers from limitations imposed by the limited screen space available on most users' television sets. Thus, only a small piece of scheduling information can be shown at one time on the screen, and a user must often wait a considerable amount of time until the listings information of interest appears on her television screen.

Yet another known system disseminates listings information through a network such as the Internet. GIST Communications, Inc. provides television program listings information through its web site at www.gist.com. A user can advantageously avail herself of the GIST listings service by entering a piece of information that permits the service to properly identify the listings information for that user. For example, the user can provide her postal "zip" code, and the GIST service can identify and provide the local and national listings information for that user's locale. A listings service such as GIST maintains a large database of listings information that is frequently updated. When a user requests listings information, the listings service searches the database, identifies the appropriate listings information, and then sends it to the requesting user.

Certain Internet web sites (called herein "general purpose information service providers") provide a diverse set of information to users. For example, the Yahoo! web site at www.yahoo.com provides stock quotes, weather forecasts, news stories, and other information to users. This type of site has recently enabled a user to

5 customize the information the user receives from the site. For example, the My Yahoo! service provided by Yahoo! permits the user to specify the types of information the user would like to see on a page customized by Yahoo! These preferences are correlated by Yahoo! with a username and password provided by the user. When the user "logs in" with her username and password, Yahoo! dynamically

10 builds and sends to the user a page customized in accordance with the preferences set by the user. For example, a user may set her preferences to have displayed on her customized page business and technology news stories; the weather forecast for her hometown; and stock quotes for five specific stocks.

A user may also wish to have listings information for her local cable

15 television system displayed on her customized web page. A known system for providing this information as part of the customized page is to store a complete database of listings information at the general purpose information service provider. When the user logs in, the complete listings database is searched, the appropriate listings information is identified, and then is integrated into the user's customized

20 page and displayed therein to the user. However, this known system disadvantageously requires the general purpose information system provider to maintain an up-to-date database of listings information, which can be expensive. It is also inefficient for several general purpose information service providers to store and maintain listings databases in order to provide the same service to their respective

25 users. A better system would centralize listings functionality so that the costs associated with storing and maintaining listings information can be more efficiently shared among disseminators of listings information, and the listings information can be provided expertly by specialists in the listings information field.

30 **Summary of the Invention**

An embodiment of the present invention advantageously provides listings information from a specialized listings server to a general purpose information service provider. The listings server receives a request for listings information from the general purpose information service provider. This request is typically triggered
5 by a request from a user for a customized page. Listings information is identified and sent to the general purpose information service provider based at least partly upon information included in the listings request. The listings information can also be composed in accordance with prearranged conditions set by the general purpose information service provider and/or the listings server, format codes sent separately
10 by the general purpose information service provider, etc. The listings information is incorporated into a dynamically generated customized page that is sent to the user. In this way, the user is advantageously provided with customized listings information that comports with the preferences expressed by the user.

15 **Brief Description of the Drawings**

FIG 1 shows an system in accordance with an embodiment of the present invention
FIG 2 shows an apparatus in accordance with an embodiment of the present invention.

FIG 3 shows a flowchart illustrating the method in accordance with an embodiment
20 of the present invention.

Detailed Description

An embodiment of the present invention advantageously receives a request for listings information from a general purpose information service provider (a
25 "general provider"), identifies the appropriate listings information based upon information received in the request, and then sends the appropriate listings information to the general provider. Typically, the request from the general provider is triggered by a user request for the user's customized page. When the general provider receives the listings information, it incorporates it into a customized page
30 for the user, which it sends to the user.

An embodiment of a system in accordance with the present invention is shown in FIG 1. A general provider, a listings provider and a user are coupled by a network. The term "coupled" is meant to encompass direct and indirect connection. In other words, A is "coupled" to B if A is directly connected to B, and A is

5 "coupled" to B if A is directly connected to C and C is directly connected to B. Examples of network include the Internet, and intranet, a local area network (LAN), a Wide Area Network (WAN), etc. The general provider, listings provider and user are each comprised of a computer having a processor, a memory coupled to the processor, and a port adapted to couple the processor to a network. The user also

10 includes a display device (e.g., a computer monitor, a set of speakers, etc.) coupled to the user processor. The memory of the user stores instructions adapted to be executed by the user's processor to send a request for a customized page to the general provider, to receive the customized page from the general provider, and to display the customized page on the display device. The general provider memory

15 includes instructions adapted to be executed by the general provider's processor to receive a user request for a customized page, send a listings request to the listings server, receive listings information from the listings server, and generate a customized page for the user including listings information, and send the customized page to the user.

20 FIG 2 shows an apparatus in accordance with an embodiment of the present invention. The embodiment shown in FIG 2 is the listings server of FIG 1. Processor 201 can be a general purpose microprocessor, such as the Pentium III processor manufactured by the Intel Corporation of Santa Clara, California, or an Application Specific Integrated Circuit (ASIC). The ASIC is an integrated circuit

25 that is designed to embody in hardware and firmware at least a part of the method in accordance with an embodiment of the present invention. An example of an ASIC is a digital signal processor. Memory 202 is coupled to processor 201. Memory 202 is any device capable of storing digital information, such as Read Only Memory (ROM), Random Access Memory (RAM), a hard disk, a floppy disk, a magneto-

30 optical digital storage device, some combination thereof, etc. Memory 202 should be

both readable and writable. Port 203 is adapted to couple processor 201 to a network. Examples of port 203 include an RS-232 interface, a modem including a telephone jack and/or a wireless connection, etc. Memory 202 stored listings instructions 204 adapted to be executed by processor 201 to perform an embodiment
5 of the method of the present invention. For example, listings instructions are adapted to be executed by processor 201 to receive a listings request from a general provider, identify appropriate listings information based at least partly upon the content of the listings request, and send the appropriate listings information to the general provider. FIG 2 also shows a listings database 205 coupled to processor 201 through a
10 database port 206. The listings database in one embodiment of the present invention is a device that stores digital information accessible by SQL commands issued from processor 201. In another embodiment, listings database is coupled to a network, and processor 201 communicates with listings database 205 through port 203 and the network.

15 FIG 3 is a flowchart showing the method in accordance with an embodiment of the present invention, as well as additional steps meant to illustrate the context in which the method of the embodiment is performed. A user request for a customized page is received by the general provider, step 301. The general provider sends a listings request to the listings server, step 302. This listings request includes
20 information sufficient to select the appropriate listings information to ultimately show to the user. For example, in one embodiment, the user's zip code is sent to the listings server as part of the listings request. In another embodiment, at least one of the user's programmer identifiers is sent as part of the listings request. An example of a user programmer identifier is an identifier for the user's cable service provider
25 (E.g., "Media General Cable", "341A3E", etc.) In yet another embodiment, the user's home address or parts thereof can be included in the listings request (E.g., Topeka, Kansas, 1134 Fein Boulevard, etc.) Likewise, the listings request can include user preference data as to, for example, the type of programs in which the user is interested (sports, nature, documentary, drama, etc.); keywords (John Wayne,
30 NFL, Rocky Mountains, Cetacean, etc.); dates and times, and even Boolean search

phrases (whale AND orca AND NOT gray, mountain OR climbing AND NOT dew, etc.) The listings server searches a listings database and identifies the appropriate listings information based at least partly upon the information received in the listings request (e.g., type of entertainment, dates and times, keywords, Boolean search phrases, etc.), step 303. The appropriate listings information can also be identified based upon the identity of the general provider from which the request is received; a code embedded in the request by the general provider or a third party that specifies limitations (e.g., date, time, format, etc.) on listings information to return in response to the listings request, and so on. The identifies listings information is sent to the general provider, step 304. The general provider incorporates the listings information in a dynamically generated customized page, step 305, which the general provider sends to the user, step 306. The general provider may, but need not, include all of the listings information provided by the listings server in the customized page. Likewise, the general provider can add further listings information obtained locally and/or from a third party to the listings information received from the listings server and incorporate this superset of information into the customized page. The software implementing the method in accordance with the one embodiment of the present invention is implemented in Extensible Markup Language ("XML"), which is a programming language that typically conforms to the SGML standard. For example, XML commands are executed on the general provider processor to receive a customized page request from a user, and to formulate and send a listings request to the listings server. These XML commands are further adapted to be executed by the general provider's processor to receive listings information from the listings server, and to generate and send a customized page that includes listings information to the user. In another embodiment, the method of the present invention is performed using software written in the C++ programming language. In yet another embodiment, a mixture of XML and C++ is used. Other languages can also be used, especially those useful for list processing, such as the PERL 5.0 programming language. The listings server and the general provider server can communicate by HyperText Transfer Protocol ("HTTP")

request, DLL function call, or via a command line tool that advantageously provides an interface for the entry of text commands. An example of a command line tool is the DOS Command Line tool for Windows 3.1 made by the Microsoft Corporation of Redmond, Washington.

- 5 Listings information can advantageously include the time, date and channel on which a show is to be broadcast or otherwise made available to a user; the title of the show; information about the show, etc.

 The present invention advantageously provides listings information to a general server, and thus to a user in an efficient fashion. The embodiments described
10 above are illustrative of the present invention, and are meant to illustrate and not to limit the scope of the claims. Those skilled in the art will appreciate that the present invention as defined by the claims includes numerous variations not described exhaustively above. For example, while the examples above indicate that the listings request is received by the listing server from the general provider, in one
15 embodiment, the listings request is received directly from the user, and the listings information is sent in response from the listings server to the requesting user, where it is displayed. Another variation is the listings request is received from the general provider but the listings information is sent directly to a user. Alternatively, the listings request is received from a user, but sent to a general provider, which passes
20 it on to the user. These and other variations are meant to be included within the scope of the present invention, as will be appreciated by those skilled in the art.

What Is Claimed Is:

1. A method for communicating program listings information, comprising:
receiving a program listings request at a specialized listings server;
selecting program listings information based at least partly upon the request;
providing the selected program listings information to an information service provider.
2. The method of claim 1, wherein the program listings request is received from a user.
3. The method of claim 1, wherein the program listings request is received from a program distributor.
4. The method of claim 1, wherein the program listings request is received from the information service provider.
5. The method of claim 1, wherein the program listings request is triggered by a user's request.
6. The method of claim 1, wherein the program listings request is triggered by a user's request for a customized page.
7. The method of claim 1, wherein the program listings request includes a zip code.
8. The method of claim 1, wherein the program listings request includes a geographical place name.

9. The method of claim 1, wherein the program listings request includes a program distributor identifier.
10. The method of claim 1, wherein the program listings request includes an identifier for at least a portion of a user's home address.
11. The method of claim 1, wherein the program listings request includes user preference data.
12. The method of claim 1, further comprising forming a search query for a listings database.
13. The method of claim 1, further comprising forming a search query for a listings database based at least partly upon the program listings request.
14. The method of claim 1, further comprising forming a search query for a listings database based at least partly upon an identity of the information service provider.
15. The method of claim 1, further comprising forming a search query for a listings database based at least partly upon a code embedded in the program listings request.
16. The method of claim 1, further comprising forming a search query for a listings database based at least partly upon a code embedded in the program listings request by a third party.
17. The method of claim 1, further comprising searching a listings database for program listings information.

18. The method of claim 1, further comprising searching a listings database for program listings information based at least partly upon the program listings request.
19. The method of claim 1, wherein the selected program listings information is forwarded to a user.
20. The method of claim 1, wherein less than all of the selected program listings information is forwarded to a user.
21. The method of claim 1, wherein the selected program listings information is forwarded to a user along with additional listings information.
22. The method of claim 1, wherein less than all of the selected program listings information is forwarded to a user along with additional listings information.
23. The method of claim 1, wherein the selected program listings information is forwarded to a program distributor.
24. The method of claim 1, wherein the selected program listings information is composed in accordance with prearranged conditions.
25. The method of claim 1, wherein the selected program listings information is incorporated into a dynamically generated customized page.
26. The method of claim 1, wherein the selected program listings information is incorporated into a dynamically generated page that is customized to a user's preferences.
27. The method of claim 1, wherein the selected program listings information is

displayed to a user.

28. The method of claim 1, wherein the selected program listings information is displayed to a user in a dynamically generated page.
29. The method of claim 1, wherein the selected program listings information is displayed to a user according to the user's preferences.
30. The method of claim 1, wherein the selected program listings information is displayed to a user in a dynamically generated page that is customized to the user's preferences.
31. The method of claim 1, wherein the selected program listings information is provided directly to a user rather than to the information service provider.
32. A computer-readable medium storing instructions that, when executed by one or more processors, cause the one or more processors to perform steps comprising:
 - receiving a program listings request at a specialized listings server;
 - selecting program listings information based at least partly upon the request;
 - providing the selected program listings information to an information service provider.
33. The medium of claim 32, wherein the program listings request is received from a user.
34. The medium of claim 32, wherein the program listings request is received from a program distributor.

35. The medium of claim 32, wherein the program listings request is received from the information service provider.
36. The medium of claim 32, wherein the program listings request is triggered by a user's request.
37. The medium of claim 32, wherein the program listings request includes a zip code.
38. The medium of claim 32, wherein the program listings request includes a geographical place name.
39. The medium of claim 32, wherein the program listings request includes a program distributor identifier.
40. The medium of claim 32, wherein the program listings request includes an identifier for at least a portion of a user's home address.
41. The medium of claim 32, wherein the program listings request includes user preference data.
42. The medium of claim 32, further comprising forming a search query for a listings database.
43. The medium of claim 32, further comprising forming a search query for a listings database based at least partly upon the program listings request.
44. The medium of claim 32, further comprising searching a listings database for program listings information.

45. The medium of claim 32, further comprising searching a listings database for program listings information based at least partly upon the program listings request.
46. The medium of claim 32, wherein the selected program listings information is forwarded to a user.
47. The medium of claim 32, wherein less than all of the selected program listings information is forwarded to a user.
48. The medium of claim 32, wherein the selected program listings information is forwarded to a user along with additional listings information.
49. The medium of claim 32, wherein less than all of the selected program listings information is forwarded to a user along with additional listings information.
50. The medium of claim 32, wherein the selected program listings information is composed in accordance with prearranged conditions.
51. The medium of claim 32, wherein the selected program listings information is incorporated into a dynamically generated customized page.
52. The medium of claim 32, wherein the selected program listings information is incorporated into a dynamically generated page that is customized to a user's preferences.
53. An apparatus for communicating program listings information, comprising:
means for receiving a program listings request at a specialized listings server;

means for selecting program listings information based at least partly upon the request;

means for providing the selected program listings information to an information service provider.

54. The apparatus of claim 53, further comprising means for forming a search query for a listings database.
55. The apparatus of claim 53, further comprising means for forming a search query for a listings database based at least partly upon the program listings request.
56. The apparatus of claim 53, further comprising means for searching a listings database for program listings information.
57. The apparatus of claim 53, further comprising means for searching a listings database for program listings information based at least partly upon the program listings request.
58. A method for obtaining program listings information, comprising:
 - sending a program listings request;
 - receiving from a specialized listings server via the information service provider selected program listings information that is based at least partly upon the request.
59. The method of claim 58, wherein the program listings request is sent by a user.
60. The method of claim 58, wherein the program listings request is sent by the information service provider.

61. The method of claim 58, wherein the program listings request is sent from the information service provider to the specialized listings server.
62. The method of claim 58, wherein the program listings request is triggered by a user's request.
63. The method of claim 58, wherein the program listings request includes a geographical place name.
64. The method of claim 58, wherein the program listings request includes a program distributor identifier.
65. The method of claim 58, wherein the program listings request includes user preference data.
66. The method of claim 58, wherein the program listings request includes an identity of the information service provider.
67. The method of claim 58, wherein the program listings request includes an embedded code.
68. The method of claim 58, wherein the selected program listings information is forwarded to a user.
69. The method of claim 58, wherein less than all of the selected program listings information is forwarded to a user.
70. The method of claim 58, wherein the selected program listings information is forwarded to a user along with additional listings information.

71. The method of claim 58, wherein less than all of the selected program listings information is forwarded to a user along with additional listings information.
72. The method of claim 58, wherein the selected program listings information is forwarded to a program distributor.
73. The method of claim 58, wherein the selected program listings information is composed in accordance with prearranged conditions.
74. The method of claim 58, wherein the selected program listings information is incorporated into a dynamically generated customized page.
75. The method of claim 58, wherein the selected program listings information is incorporated into a dynamically generated page that is customized to a user's preferences.
76. The method of claim 58, wherein the selected program listings information is provided directly to a user rather than to the information service provider.
77. A computer-readable medium storing instructions that, when executed by one or more processors, cause the one or more processors to perform steps comprising:
 - sending a program listings request;
 - receiving from a specialized listings server via the information service provider selected program listings information that is based at least partly upon the request.
78. The medium of claim 77, wherein the program listings request is sent by a

user.

79. The medium of claim 77, wherein the program listings request is sent to the information service provider.
80. The medium of claim 77, wherein the program listings request is sent by the information service provider.
81. The medium of claim 77, wherein the program listings request is sent to the information service provider by a user.
82. The medium of claim 77, wherein the program listings request is sent from the information service provider to the specialized listings server.
83. The medium of claim 77, wherein the program listings request is triggered by a user's request.
84. The medium of claim 77, wherein the program listings request is triggered by a user's request for a customized page.
85. The medium of claim 77, wherein the program listings request includes a zip code.
86. The medium of claim 77, wherein the program listings request includes a geographical place name.
87. The medium of claim 77, wherein the program listings request includes a program distributor identifier.
88. The medium of claim 77, wherein the program listings request includes an

identifier for at least a portion of a user's home address.

89. The medium of claim 77, wherein the program listings request includes user preference data.
90. The medium of claim 77, wherein the program listings request includes an identity of the information service provider.
91. The medium of claim 77, wherein the program listings request includes an embedded code.
92. The medium of claim 77, wherein the selected program listings information includes information about a program.
93. The medium of claim 77, wherein the selected program listings information includes a name of a program.
94. The medium of claim 77, wherein the selected program listings information includes a time at which a program is scheduled to begin to be shown.
95. The medium of claim 77, wherein the selected program listings information includes a time at which a program is scheduled to end being shown.
96. The medium of claim 77, wherein the selected program listings information includes a channel on which a program will be shown.
97. The medium of claim 77, wherein the selected program listings information is forwarded to a user.
98. The medium of claim 77, wherein less than all of the selected program

listings information is forwarded to a user.

99. The medium of claim 77, wherein the selected program listings information is forwarded to a user along with additional listings information.
100. The medium of claim 77, wherein less than all of the selected program listings information is forwarded to a user along with additional listings information.
101. The medium of claim 77, wherein the selected program listings information is forwarded to a program distributor.
102. The medium of claim 77, wherein the selected program listings information is composed in accordance with prearranged conditions.
103. The medium of claim 77, wherein the selected program listings information is incorporated into a dynamically generated customized page.
104. The medium of claim 77, wherein the selected program listings information is incorporated into a dynamically generated page that is customized to a user's preferences.
105. The medium of claim 77, wherein the selected program listings information is provided directly to a user rather than to the information service provider.
106. An apparatus for communicating program listings information, comprising:
 - means for sending a program listings request;
 - means for receiving from a specialized listings server via the information service provider selected program listings information that is based at least partly upon the request.

107. A method for obtaining program listings information, comprising:
receiving at an information service provider a program listings request;
forwarding the program listings request to a specialized listings server;
receiving from the specialized listings server selected program listings information that is based at least partly upon the request.
108. The method of claim 107, wherein the program listings request is received from a user.
109. The method of claim 107, wherein the program listings request is received from a program distributor.
110. The method of claim 107, wherein the program listings request is triggered by a user's request.
111. The method of claim 107, wherein the program listings request is triggered by a user's request for a customized page.
112. The method of claim 107, wherein the program listings request includes a zip code.
113. The method of claim 107, wherein the program listings request includes a geographical place name.
114. The method of claim 107, wherein the program listings request includes a program distributor identifier.

- 115. The method of claim 107, wherein the program listings request includes an identifier for at least a portion of a user's home address.
- 116. The method of claim 107, wherein the program listings request includes user preference data.
- 117. The method of claim 107, further comprising forming a search query for a listings database.
- 118. The method of claim 107, further comprising forming a search query for a listings database based at least partly upon the program listings request.
- 119. The method of claim 107, further comprising forming a search query for a listings database based at least partly upon an identity of the information service provider.
- 120. The method of claim 107, further comprising forming a search query for a listings database based at least partly upon a code embedded in the program listings request.
- 121. The method of claim 107, further comprising forming a search query for a listings database based at least partly upon a code embedded in the program listings request by a third party.
- 122. The method of claim 107, further comprising searching a listings database for program listings information.
- 123. The method of claim 107, further comprising searching a listings database for program listings information based at least partly upon the program listings request.

- 124. The method of claim 107, further comprising forwarding the selected program listings information to a user.
- 125. The method of claim 107, further comprising forwarding less than all of the selected program listings information to a user.
- 126. The method of claim 107, further comprising forwarding the selected program listings information to a user along with additional listings information.
- 127. The method of claim 107, further comprising forwarding less than all of the selected program listings information to a user along with additional listings information.
- 128. The method of claim 107, further comprising forwarding the selected program listings information to a program distributor.
- 129. The method of claim 107, wherein the selected program listings information is composed in accordance with prearranged conditions.
- 130. The method of claim 107, wherein the selected program listings information is composed in accordance with prearranged conditions set by the information service provider.
- 131. The method of claim 107, wherein the selected program listings information is composed in accordance with prearranged conditions set by the specialized listings server.
- 132. The method of claim 107, wherein the selected program listings information

is composed in accordance with format codes.

133. The method of claim 107, wherein the selected program listings information is composed in accordance with format codes sent to the specialized listings server.
134. The method of claim 107, wherein the selected program listings information is composed in accordance with format codes sent by the information service provider.
135. The method of claim 107, wherein the selected program listings information is incorporated into a dynamically generated page.
136. The method of claim 107, wherein the selected program listings information is incorporated into a dynamically generated customized page.
137. The method of claim 107, wherein the selected program listings information is incorporated into a dynamically generated page that is customized to a user's preferences.
138. The method of claim 107, wherein the selected program listings information is provided directly to a user rather than to the information service provider.
139. A computer-readable medium storing instructions that, when executed by one or more processors, cause the one or more processors to perform steps comprising:
 - receiving at an information service provider a program listings request;
 - forwarding the program listings request to a specialized listings server;

receiving from the specialized listings server selected program listings information that is based at least partly upon the request.

- 140. The medium of claim 139, wherein the program listings request is received from a user.
- 141. The medium of claim 139, wherein the program listings request is received from a program distributor.
- 142. The medium of claim 139, wherein the program listings request is triggered by a user's request.
- 143. The medium of claim 139, wherein the program listings request is triggered by a user's request for a customized page.
- 144. The medium of claim 139, wherein the program listings request includes a zip code.
- 145. The medium of claim 139, wherein the program listings request includes a geographical place name.
- 146. The medium of claim 139, wherein the program listings request includes a program distributor identifier.
- 147. The medium of claim 139, wherein the program listings request includes an identifier for at least a portion of a user's home address.
- 148. The medium of claim 139, wherein the program listings request includes user preference data.

149. The medium of claim 139, further comprising forming a search query for a listings database.
150. The medium of claim 139, further comprising forming a search query for a listings database based at least partly upon the program listings request.
151. The medium of claim 139, further comprising forming a search query for a listings database based at least partly upon an identity of the information service provider.
152. The medium of claim 139, further comprising forming a search query for a listings database based at least partly upon a code embedded in the program listings request.
153. The medium of claim 139, further comprising forming a search query for a listings database based at least partly upon a code embedded in the program listings request by a third party.
154. The medium of claim 139, further comprising searching a listings database for program listings information.
155. The medium of claim 139, further comprising searching a listings database for program listings information based at least partly upon the program listings request.
156. The medium of claim 139, further comprising forwarding the selected program listings information to a user.
157. The medium of claim 139, further comprising forwarding less than all of the selected program listings information to a user.

158. The medium of claim 139, further comprising forwarding the selected program listings information to a user along with additional listings information.
159. The medium of claim 139, further comprising forwarding less than all of the selected program listings information to a user along with additional listings information.
160. The medium of claim 139, further comprising forwarding the selected program listings information to a program distributor.
161. The medium of claim 139, wherein the selected program listings information is composed in accordance with prearranged conditions.
162. The medium of claim 139, wherein the selected program listings information is composed in accordance with prearranged conditions set by the information service provider.
163. The medium of claim 139, wherein the selected program listings information is composed in accordance with prearranged conditions set by the specialized listings server.
164. The medium of claim 139, wherein the selected program listings information is composed in accordance with format codes.
165. The medium of claim 139, wherein the selected program listings information is composed in accordance with format codes sent to the specialized listings server.

166. The medium of claim 139, wherein the selected program listings information is composed in accordance with format codes sent by the information service provider.
167. The medium of claim 139, wherein the selected program listings information is incorporated into a dynamically generated page.
168. The medium of claim 139, wherein the selected program listings information is incorporated into a dynamically generated customized page.
169. The medium of claim 139, wherein the selected program listings information is incorporated into a dynamically generated page that is customized to a user's preferences.
170. The medium of claim 139, wherein the selected program listings information is provided directly to a user rather than to the information service provider.
171. An apparatus for communicating program listings information, comprising:
 - receiving at an information service provider a program listings request;
 - means for forwarding the program listings request to a specialized listings server;
 - means for receiving from the specialized listings server selected program listings information that is based at least partly upon the request.
172. The apparatus of claim 171, further comprising means for forming a search query for a listings database.
173. The apparatus of claim 171, further comprising means for forming a search query for a listings database based at least partly upon the program listings request.

- 174. The apparatus of claim 171, further comprising means for searching a listings database for program listings information.
- 175. The apparatus of claim 171, further comprising means for searching a listings database for program listings information based at least partly upon the program listings request.
- 176. The apparatus of claim 171, further comprising means for forwarding the selected program listings information to a user.
- 177. The apparatus of claim 171, further comprising means for forwarding less than all of the selected program listings information to a user.
- 178. The apparatus of claim 171, further comprising means for forwarding the selected program listings information to a user along with additional listings information.
- 179. The apparatus of claim 171, further comprising means for forwarding less than all of the selected program listings information to a user along with additional listings information.
- 180. The apparatus of claim 171, further comprising means for forwarding the selected program listings information to a program distributor.

FIG. 1

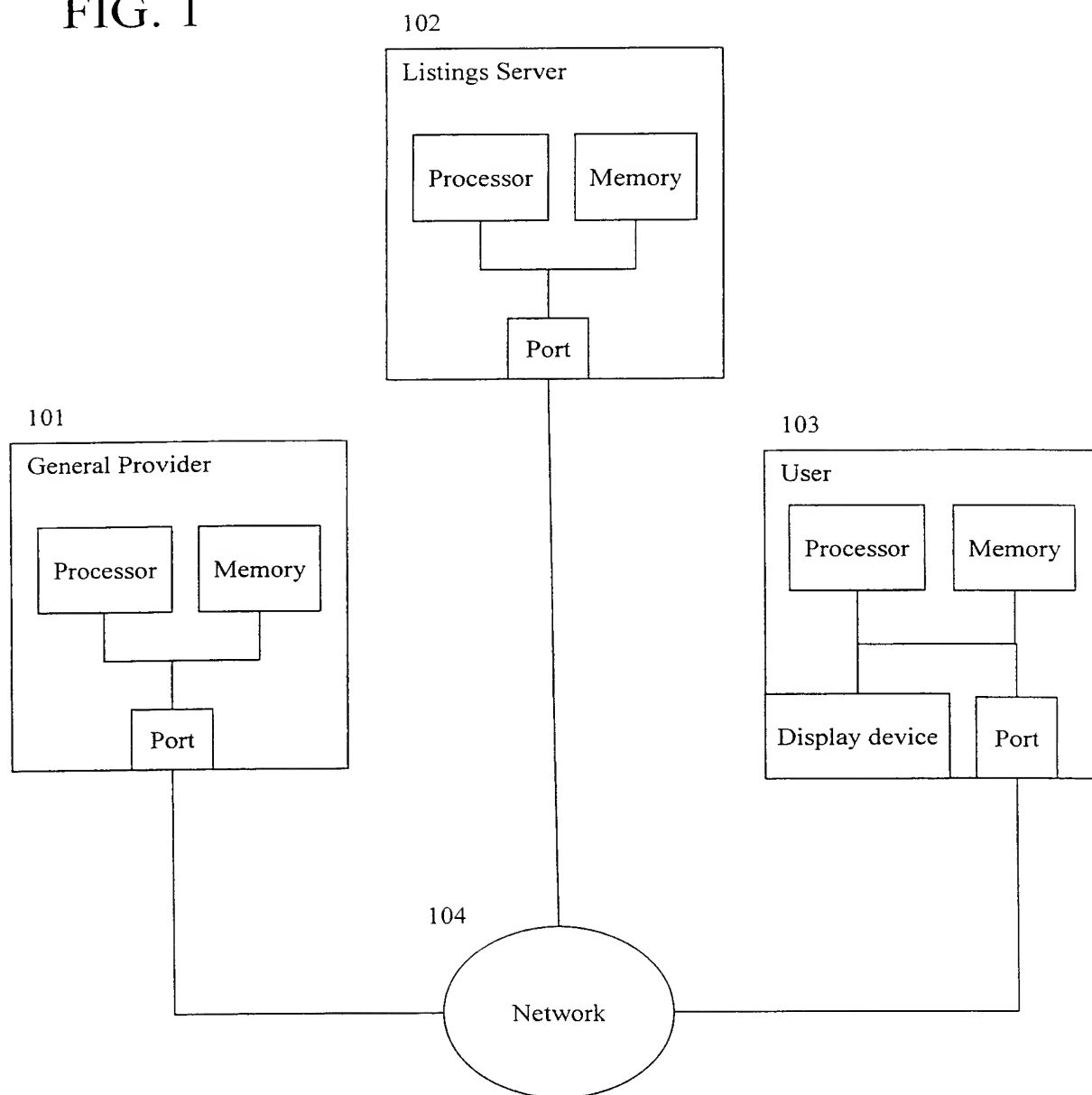


FIG. 2

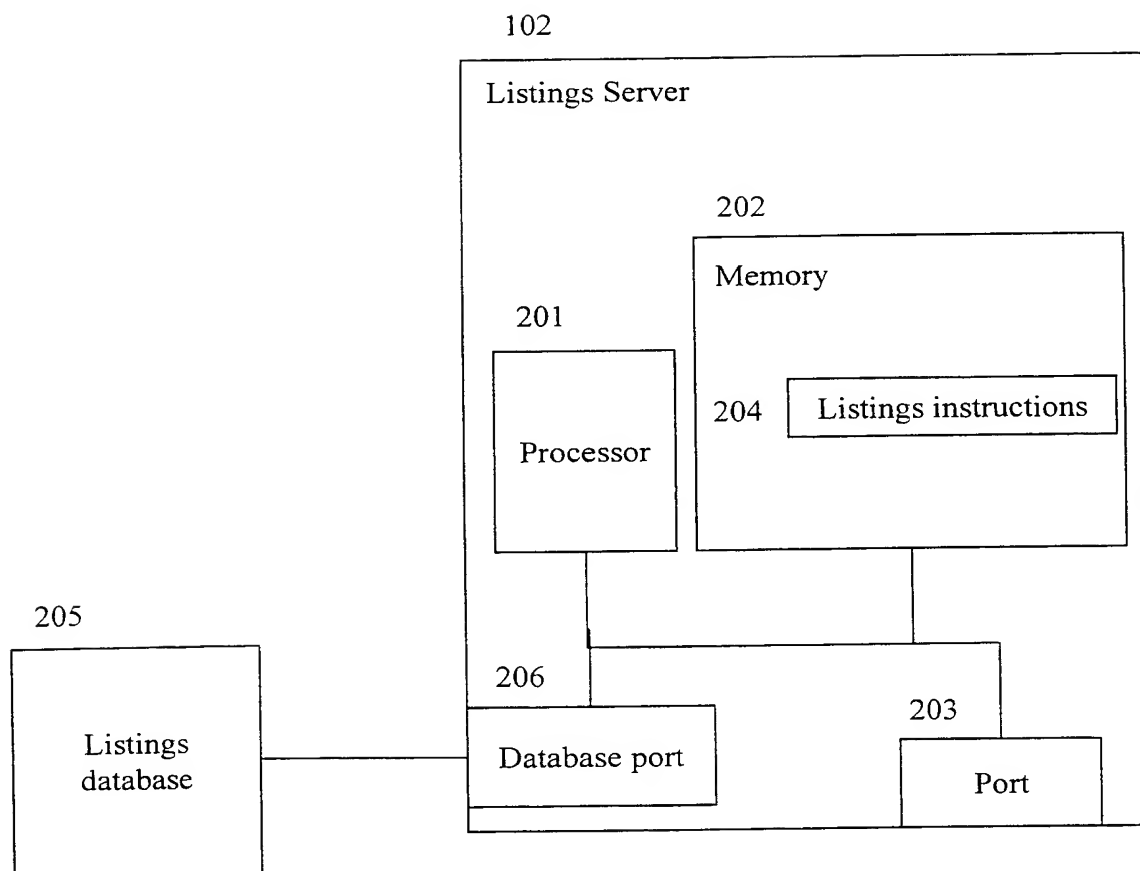
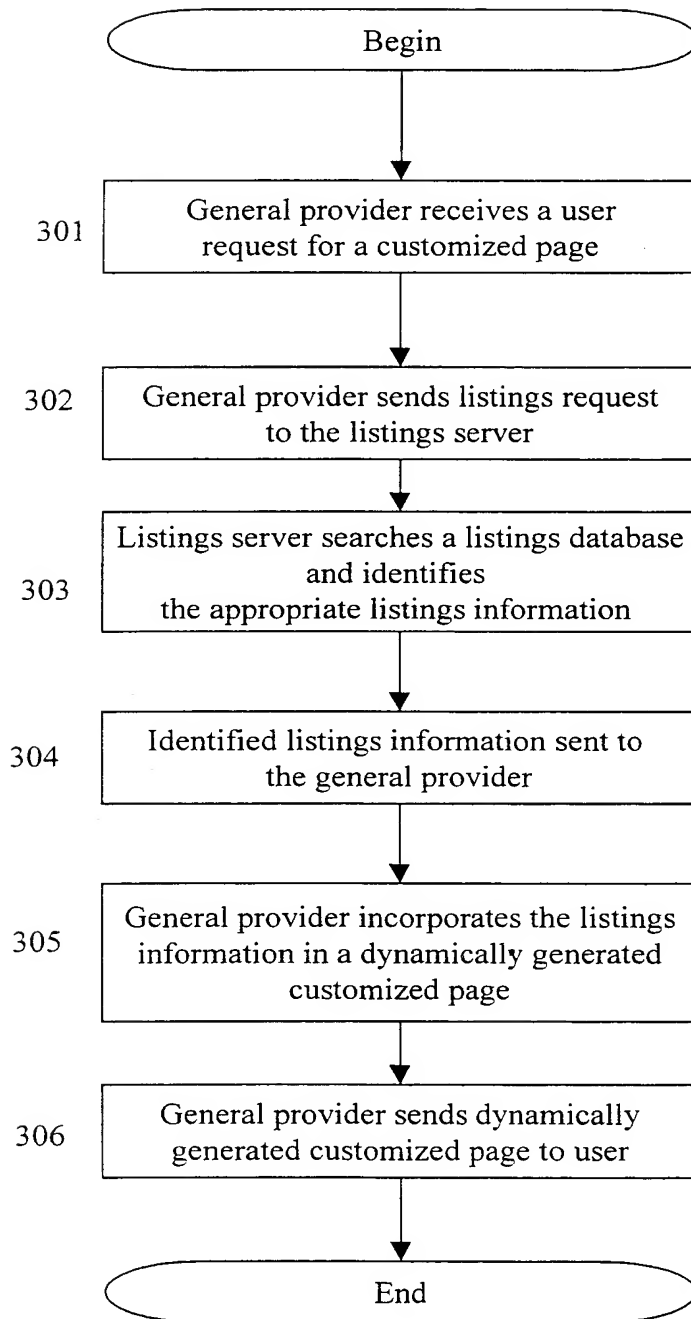


FIG. 3



INTERNATIONAL SEARCH REPORT

International application No.
PCT/US00/14600

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : GO6F 17/30

US CL : 707/10; 709/217, 218; 348/3, 6, 7, 10, 460, 563, 906.

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 707/10; 709/217, 218; 348/3, 6, 7, 10, 460, 563, 906.

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

WEST, EAST

Search terms: tv guide, web, program listings.

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|-----------|--|-----------------------|
| Y | US 5,617,565 A (AUGENBRAUN et al) 01 April 1997, col. 1, lines 56-67, col. 2, lines 1-67, col. 3, lines 1-34 and lines 57-67, col. 4, lines 1-67, col. 5, lines 1-52, col. 6, lines 5-41, col. 7, lines 54-67, col. 8, lines 51-67, col. 9, lines 1-5, col. 13, lines 6-14 and lines 20-67, col. 14, lines 1-21, and col. 16, lines 43-67. | 1-180 |

☒ Further documents are listed in the continuation of Box C. ☐ See patent family annex.

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| * Special categories of cited documents | "T" | Later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention |
| "A" document defining the general state of the art which is not considered to be of particular relevance | "X" | document of particular relevance, the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone |
| "E" earlier document published on or after the international filing date | "Y" | document of particular relevance, the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art |
| "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) | "&" | document member of the same patent family |
| "O" document referring to an oral disclosure, use, exhibition or other means | | |
| "P" document published prior to the international filing date but later than the priority date claimed | | |

| | |
|---|--|
| Date of the actual completion of the international search 25 JULY 2000 | Date of mailing of the international search report 23 AUG 2000 |
| Name and mailing address of the ISA/US Commissioner of Patents and Trademarks Box PCT Washington, D.C. 20231 Facsimile No. (703) 305-3230 | Authorized officer KIM VU <i>James R. Matthews</i> Telephone No. (703) 305-4393 |

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US00/14600

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|-----------|--|-----------------------|
| Y | US 5,559,548 A (DAVIS et al) 24 September 1996, col. 1, lines 18-67, col. 2, lines 1-67, col. 3, lines 1-67, col. 4, lines 1-25, col. 5, lines 20-67, col. 6, lines 21-67, col. 7, lines 1-38, col. 8, lines 38-48, col. 9, lines 2-67, col. 10, lines 1-67, col. 11, lines 1-67, col. 12, lines 1-67, col. 13, lines 1-67, col. 14, lines 1-67, col. 15, lines 1-67, col. 16, lines 1-67, col. 17, lines 1-9, lines 19-40, and 51-67, col. 18, lines 1-35 and lines 44-67, col. 19, lines 1-67, col. 20, lines 1-17 and lines 29-54, and col. 21, lines 9-25. | 1-180 |